(No Model.) 2 Sheets—Sheet 1.

S. C. WOLFE.

ALARM LOCK.

No. 582,711. Patented May 18, 1897.

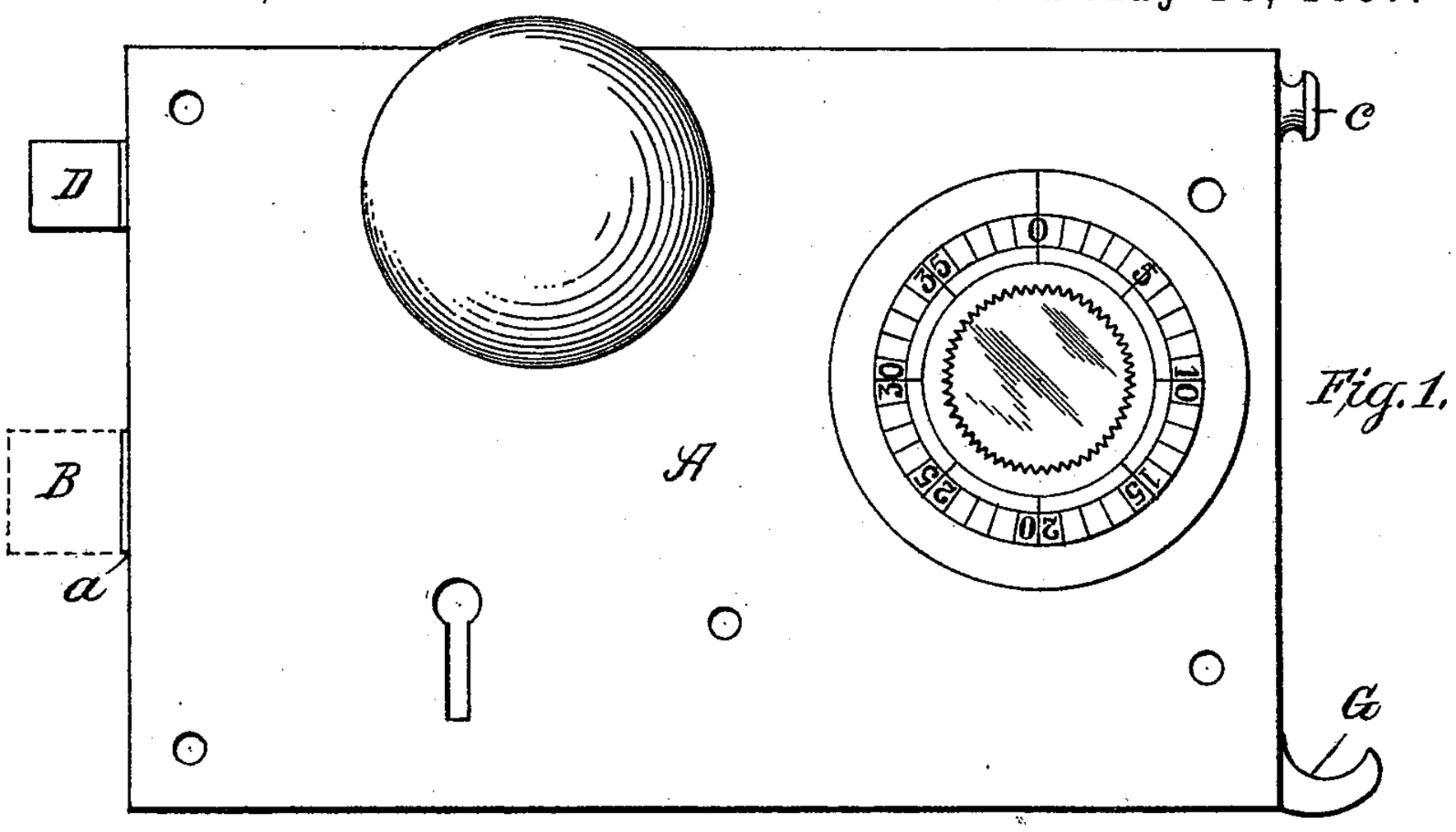

Fig. 1.

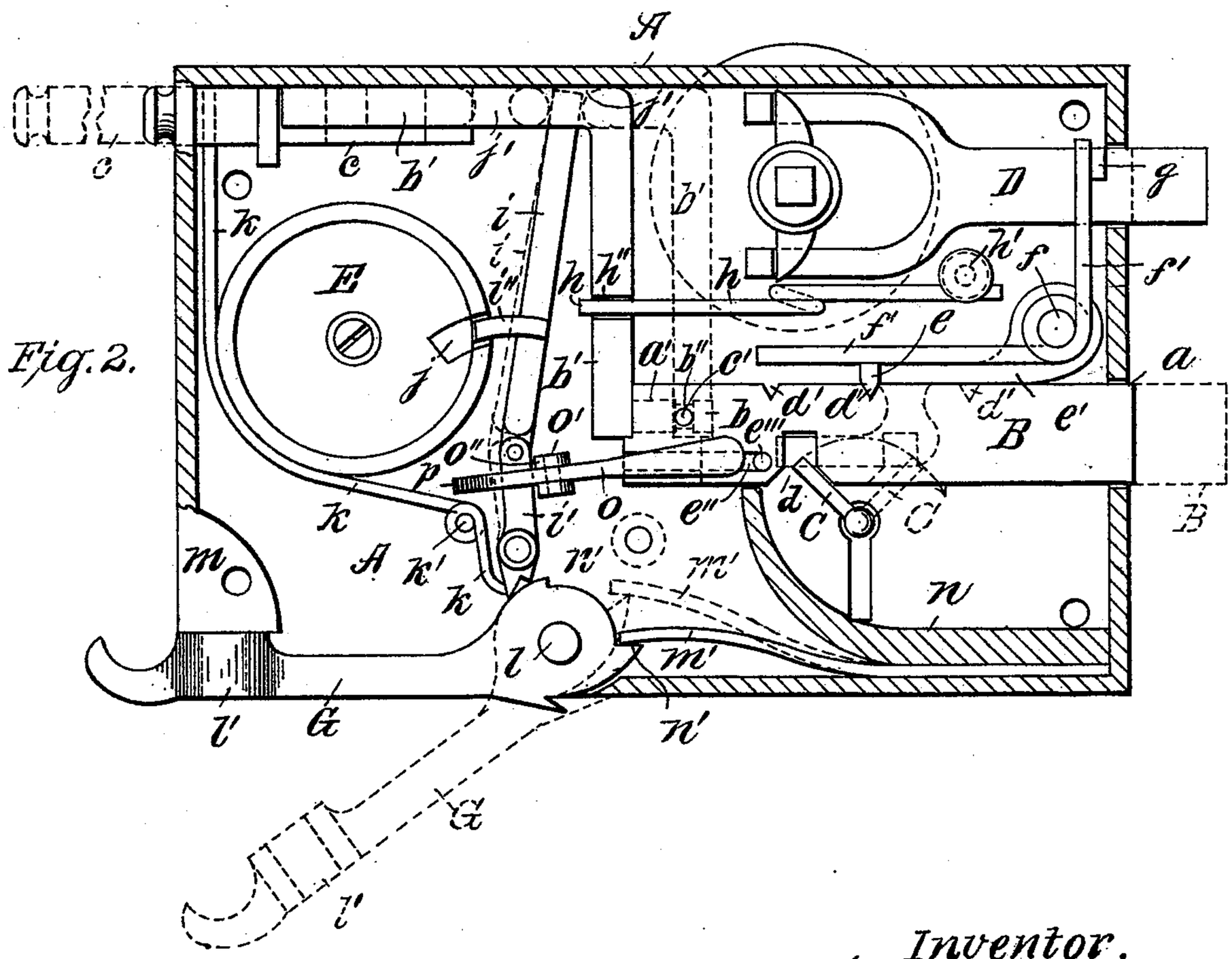

Fig. 2.

Witnesses:
J. Howard Blair.
J. C. McGuffee.

Inventor,
Simon C. Wolfe,
By Mark M. Decker
Attorney.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3

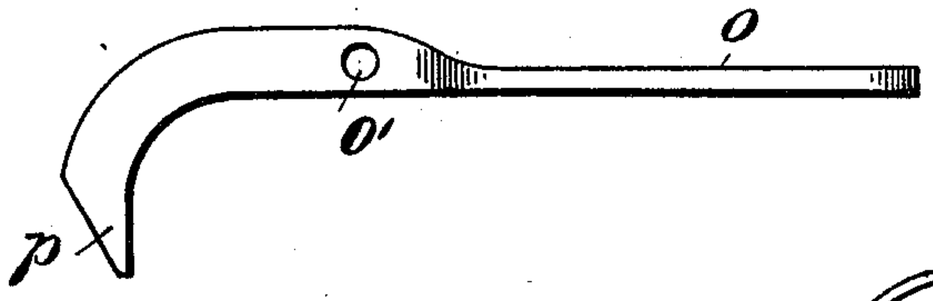


Fig. 4.

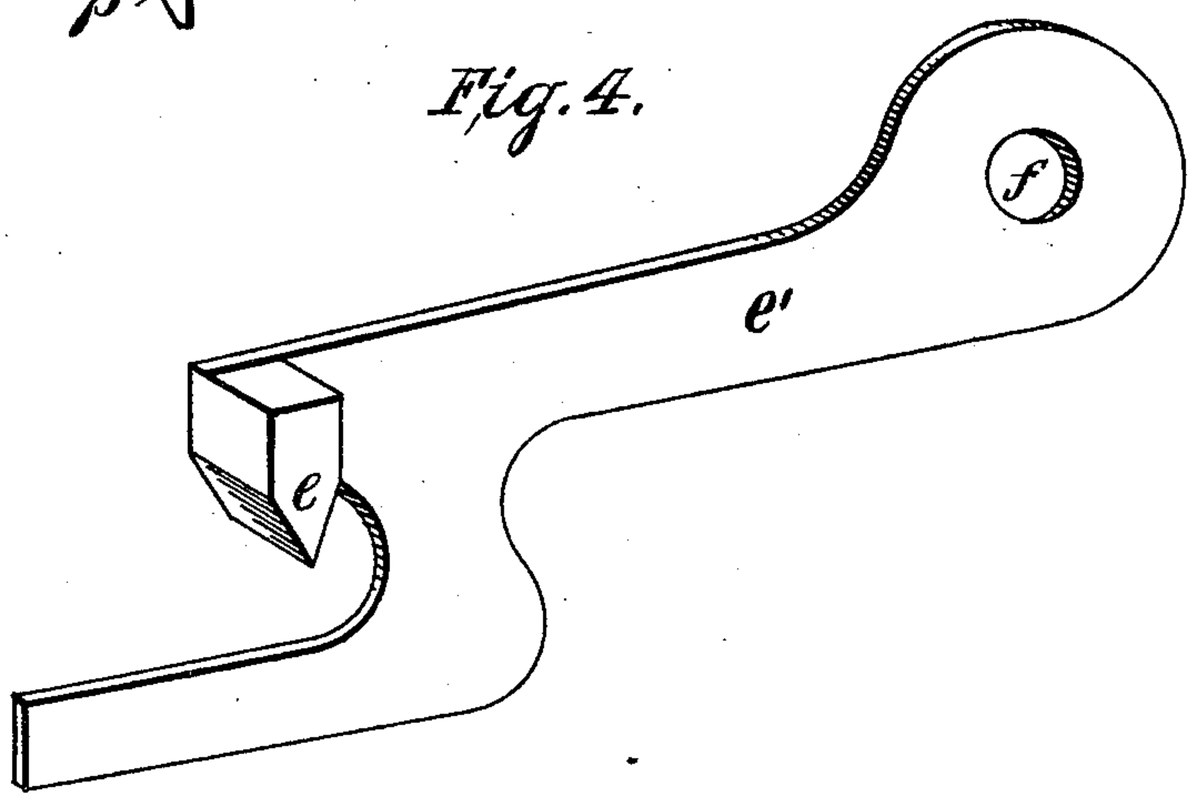


Fig. 5.

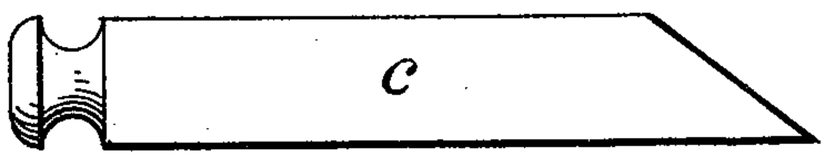
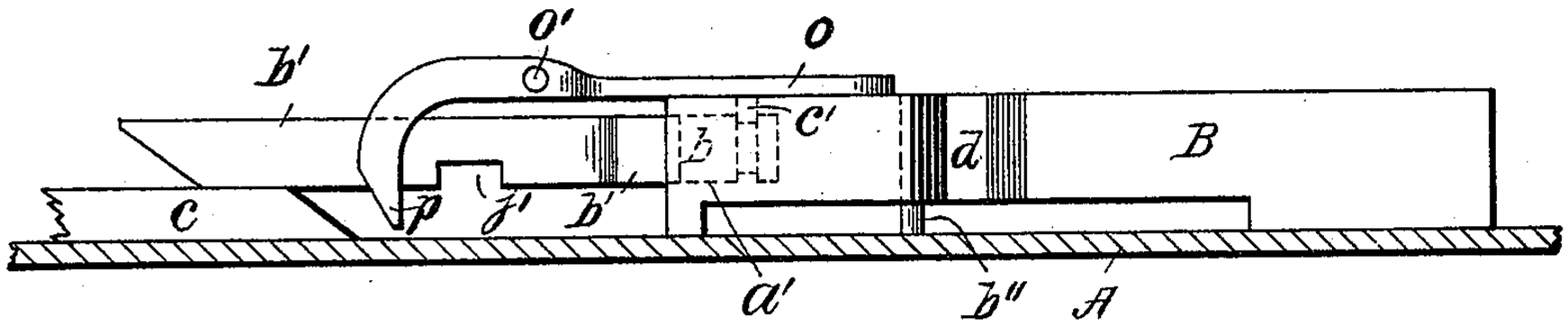


Fig. 6



Witnesses:
J. Howard Blair.
J. C. McGuffin.

Inventor,
Simon C. Wolfe,
By Mark M. Dicker
Attorney.

UNITED STATES PATENT OFFICE.

SIMON C. WOLFE, OF EIGHTY-FOUR, PENNSYLVANIA.

ALARM-LOCK.

SPECIFICATION forming part of Letters Patent No. 582,711, dated May 18, 1897.

Application filed March 12, 1896. Serial No. 582,972. (No model.)

To all whom it may concern:

Be it known that I, SIMON C. WOLFE, a citizen of the United States, residing at Eighty-Four, in the county of Washington and State of Pennsylvania, have invented an Improved Combination Burglar-Alarm Lock, of which the following is a clear and exact specification, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved combination burglar-alarm lock; and the object is to provide a lock which will give an alarm by exploding a cartridge if the key is turned or the door forced or pried in any way.

My invention consists of a suitable lock-case provided with a combination locking device and mechanism connected therewith which operates a hammer or equivalent for exploding a cartridge. A detailed description of my invention will appear hereinafter.

Reference being had to the accompanying drawings, Figure 1 is a side elevation of my improved lock, showing the combination-dial in detail. Fig. 2 is a central vertical sectional view of the same, showing the interior mechanism in its normal position, full lines, and the parts in position ready for action, dotted lines. Fig. 3 is a side elevation in detail of the trip for releasing the hammer in case the door is forced or pried. Fig. 4 is a perspective view of the tension device for holding the main-bolt in the locked or unlocked position. Fig. 5 is a side elevation of the device used in throwing the mechanism in or out of gear. Fig. 6 is a side elevation in detail of the main-bolt trip and levers used, showing more clearly the manner in which the alarm is fired.

I will now describe my invention, reference being had to the accompanying drawings, in which—

A indicates the case containing the working parts.

B is the main locking-bolt, which projects through a slot *a* in the end of the case A in the usual manner. This bolt is provided at its inner end with a hole *a'*, into which a shoulder *b* is fitted. This shoulder *b* is on the end of an arm *b'*, which runs upward to the top of the case, thence backward along the top at a point near the end of said case, where it engages the end of a bolt or equivalent *c*. This bolt *c* is adapted to be moved laterally into or out of contact with the said arm *b'*, the purpose of which is to throw the mechanism in or out of gear, as will be more fully described hereinafter.

The shoulder *b* is held in position by a pin or screw *b''*, which passes partly through the bolt B and engages a groove *c'*, thus preventing the shoulder from being pulled out of said bolt. The under side of bolt B is provided with a notch or recess *d*, which is adapted to receive the key C for locking or unlocking the bolt B. The upper side of the bolt B is provided with notches *d'* for engaging a tooth *e*, formed on an arm or lever *e'*, the purpose of which is to hold the bolt B in the locked or unlocked position. The bolt B is also provided at its inner end with a slot or groove *e''*, which is adapted to slide longitudinally on a pin *e'''*, the purpose of said groove and pin being to keep the end of the bolt B in its proper position.

The arm or lever *e'* is pivoted in the case at *f* and is provided with a spring *f'*, which spring has a tendency to keep the tooth in contact with the notches *d'*. The spring *f'* passes upward and engages a lug or projection *g*, formed on the latch-bolt D. The latch-bolt D is of the usual construction.

A spring *h* is secured to the case at *h'*. This spring runs backward and rests at its outer end in a recess *h''*, formed in the arm or lever *b'*, and acts to throw the said arm or lever downward.

A combination-lock E is secured to the case A and is of any desired construction.

A lever *i* is pivoted to a dog *i'*, which engages with a hammer G. The said dog *i'* is pivoted to the case at *i'''*. The lever *i* is provided with a lug or projection *i''*, which is adapted to enter the recesses *j*, formed in the combination-disks. The upper end of the lever *i* is adapted to enter a recess *j'* in the lever *b'* when the mechanism is thrown in gear. A spring *k* is pivoted at *k'* and is adapted to exert tension on said dog *i'* to throw it into contact with the hammer G. This spring passes around the disks and upward under the bolt *c* to hold it in position.

The hammer G is pivoted in the case at *l*.

A hole l' is formed in the outer end of the hammer to receive a cartridge of any desired caliber.

A heavy solid corner m is cast or otherwise secured in the case, the object of which is for the hammer to strike against for firing or exploding a cartridge.

A spring m' is secured in the case between the outer wall and the auxiliary wall n. The outer end of this spring bears against a projection n' on the hammer, the purpose being to throw the hammer down when it has been released to explode the cartridge. The auxiliary wall n also acts as a protector to the mechanism back of the keyhole, thus preventing the same from being tampered with from said keyhole.

A trip o is pivoted at o' in a standard or support o'', one end of which turns down against the side of the dog i', the other end resting on the main lock-bolt B, the purpose of this trip o being to release the dog i', thus throwing the hammer when the door has been forced or pried.

The operation is as follows: When the bolt c is pulled out, as shown in the dotted lines, and the main lock-bolt B is turned into the locked position and the hammer cocked or set, the lock proper is in a position ready to be fired either by turning the key or forcing or prying the door. If the key is turned, it will carry the main lock-bolt B back, as also the arm or lever b'. The lever i, being in connection with the said arm or lever b' by means of resting in the recess of j', will also be pushed back. The combination not being in the open position, the lug or projection i'' will press against the disk and throw the lower end of said lever i inward toward the main bolt B, as also the upper end of the dog i', thus throwing the dog proper out of engagement with the hammer G, when said hammer will be released and forced down by the spring m, exploding the cartridge. If the door is forced or pried, the lock-bolt B will press against the keeper on the jamb of the door-frame, which movement will throw the opposite end of said bolt inward against the trip o, which will cause the opposite end p to have a downward and inward movement which will crowd the dog i' back and release the hammer G, causing the cartridge to be fired, as before stated.

The hammer may be left set, as shown in dotted lines, without releasing the same by simply pushing the bolt c into the position shown in full lines, or the house may be entered from the outside without firing the cartridge if the person wishing to enter understands the combination.

When entering by means of the combination, the dial H is turned to the right and left to the required numbers, when the disks will be brought into the position shown at j in Fig. 2. This will allow the lug or projection i'' to enter the recesses in said disks, when the lever i and lug i'', with the arm or lever b' and main lock-bolt B, can be moved backward by means of the key C, thus allowing entrance to the house without giving any alarm.

Having described my invention, what I claim is—

1. An improved combination alarm-lock, consisting of a suitable case provided with a combination device which adapts the lock proper to be unlocked from the outside or inside without firing the alarm, said device consisting of a combination-lock, a lever having a lug or projection adapted to enter recesses in the disks of said combination-lock, an arm pivotally secured to the locking-bolt of the lock proper and adapted to engage with said lever, and an auxiliary wall for protecting the combination-lock, dog, trip, levers and springs, a bolt for throwing the mechanism in or out of gear, and a bolt having a lateral movement for firing the alarm by pressure, in combination with a hammer for receiving a cartridge, substantially as shown and described.

2. An improved combination burglar-alarm lock, consisting of a suitable case provided with a locking-bolt, an arm or lever connected with said bolt and adapted to engage the end of a lever having a lug or projection, said lever being pivoted to a dog for engaging a hammer and a trip movably secured in or to a support and adapted to engage said dog, a lever and spring for holding the same in contact with the locking-bolt, a bolt for throwing the mechanism in or out of gear and a combination device consisting of permutation-disks provided with recesses to be engaged by the said lug or projection, in connection with said mechanism for unlocking the lock proper from the outside or inside without firing the alarm, substantially as shown and described.

In testimony whereof I have hereunto set my hand this 11th day of March, 1896.

SIMON C. WOLFE.

Witnesses:
J. HOWARD BLAIR,
J. C. MCGUFFIE.